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Model No. DMAT-AB

SPORTS CONTROLLER

For

Abekas Mira

Digital Video Production Server

3 Record / 1 Playback

OR

**Super Slomo
Configuration**

User Manual

Version 1.01

TABLE OF CONTENTS

REVISION HISTORY.....	2
<i>GETTING STARTED</i>	3
1. SYSTEM DESCRIPTION.....	3
2. SYSTEM INSTALLATION	4
3. START RECORDINGS	5
4. 'CAM' KEY ASSIGNMENT	5
5. 'CLIP' KEY ASSIGNMENT.....	6
6. LIVE/ RECORDED SOURCE SELECTION (3R/1P MODE ONLY)	6
7. LIVE / RECORDED SOURCE SELECTION (SSM MODE ONLY)	7
8. SAVE CLIP.....	7
9. RECALL CLIP.....	8
10. TRIM EXISTING CLIP.....	8
11. LABEL OR RE-NAME AN EXISTING CLIP	8
12. DELETE SAVED CLIP	9
13. CREATE PLAYLIST	9
14. ASSIGN SPEED TO PLAYLIST ELEMENT	9
15. GPI FUNCTIONS	10
16. DMAT-AB FUNCTION TABLE.....	12
<i>REFERENCE</i>	16
17. SETUP MENU.....	16
18. SPECIFICATIONS.....	18
19. KEY LAYOUT	20
20. DNF CONTROLS LIMITED WARRANTY	21

REVISION HISTORY

060909	1.0	Original document
081709	1.1	Updated for SSM mode, various enhancements

Getting Started

1. SYSTEM DESCRIPTION

Designed for the chaotic and fast-paced environment of sports broadcasting, the DMAT family of Sports Controllers lets you stay in control of slow-motion instant replays, and highlights playout to create exciting visuals. Coupled with the simultaneous record and playback capabilities of Abekas Mira, DMAT gives you the power to quickly access just-recorded or archived events while continuing to record and respond to on-field action. Don't Miss A Thing!

Quickly and easily mark an IN and OUT point for instant replay. With minimal key strokes, recall it, play it, then add it to a game highlight list. Seamlessly play out highlights, one after another to tell the story - game action, player profiles, live crowd scenes, graphics, and advertisements. Personalize your control options for smooth, precise replays. A T-Bar provides precise slow motion speed control.

The DMAT-AB consists of DNF's robust controller, the ST400, with Sports Control software.

Definitions

Words surrounded by brackets, for example, **[ENTER]**, refer to keys on the DMAT-AB.

[XXX] + [XXX] refers to a combination of more than one key. Press and hold the first key, then press the second key. Keys may be released in any order.

The 6 keys located directly below the Graphic LCD display are referred to as "Softkeys." The function assigned to each key will change during operation of the device. The bottom line of the display shows the current function assigned to each softkey.

Words surrounded by "curly" brackets in bold/italic type, **{UPDATES}**, are softkeys on the DMAT-AB.

2. SYSTEM INSTALLATION

Refer to the Connection Diagram.

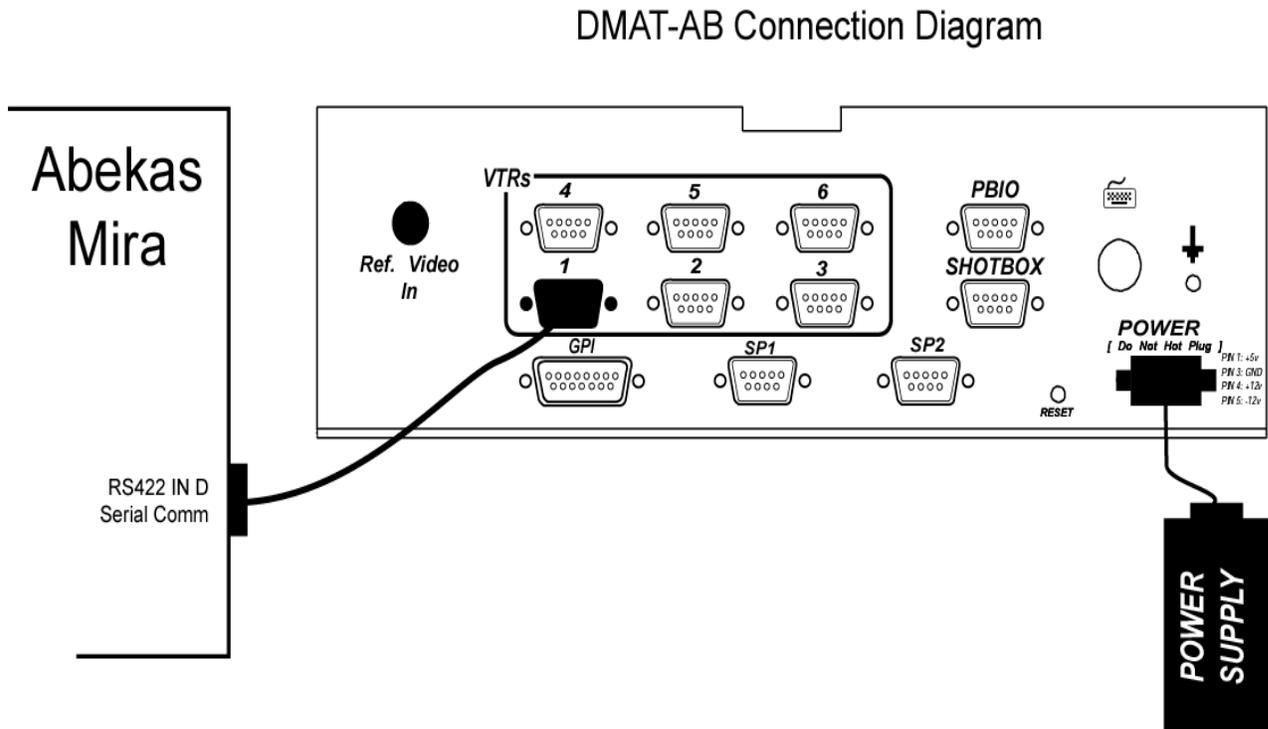
A. DMAT-AB Sports Controller

1. Plug one end of a standard 9-conductor, RS422 serial cable into the VTR1 connector on the rear of DMAT-AB. Plug the other end of the cable into the 9-pin RS422 connector "RS422 In D" on the rear of Mira.
2. Connect the DNF supplied power supply, into the POWER connector on the rear of DMAT-AB. Plug the Power Supply into an outlet, 90 VAC - 240 VAC.

B. Mira Setup

Please refer to the Abekas Mira user manual to configure Mira for 3 record / 1 playback operation or Super Slomo operation.

C. Connection Diagram



3. START RECORDINGS

All recordings must be started from the GUI of the Mira. To begin a new recording:

- A. On the Mira, open the Mira Explorer application.
- B. Within Mira Explorer, select the channel you wish to record on.
- C. Click on the Record button.
- D. Enter a Clip Name for the new recording.
- E. Click on "OK." The record button will now be flashing red.
- F. Click on the record button to begin recording.

4. 'CAM' KEY ASSIGNMENT

Assign Mira record channels A, B, and C to CAM keys CAM-A, CAM-B, and CAM-C. Press **{CAM-A}**, **{CAM-B}**, or **{CAM-C}** to instantly access the associated live or recorded video on the playback channel.

- A. Press **[SHIFT] + {CAM-A}**, **[SHIFT] + {CAM-B}**,
OR **[SHIFT] + {CAM-C}**

The current assignments are shown in the upper left portion of the display. A list of available multiple angle clips in Mira are displayed on the right side of the display.

- B. Using the wheel, scroll through and find the CLIP ID for the three (3) angle clip current in record on Mira.
- C. Press softkey **{CAM-A}**, **{CAM-B}**, or **{CAM-C}** to assign the highlighted multiple angle clip to CAM keys **{CAM-A}**, **{CAM-B}**, and **{CAM-C}**.
- D. Press **[ESC]** to exit.

NOTE: In SSM mode, only **{CAM-A}** is available.

5. 'CLIP' KEY ASSIGNMENT

Assign a pre-recorded clip to the **{CLIP}** softkey. Press **{CLIP}** to instantly access the recorded video on the playback channel.

A. Press **[SHIFT] + {CLIP}** in 3R/1P mode.

OR

Press **[SHIFT] + {CLIP-A}, {CLIP-B}, or {CLIP-C}** if you are in SSM mode.

The current assignments are shown in the upper left portion of the display. A list of clips available in Mira is displayed on the right side of the display.

B. Using the wheel, scroll through and find desired CLIP ID.

C. Press softkey **{CLIP}** to assign the highlighted clip to the **{CLIP}** softkey in 3R/1P mode.

OR

Press softkey **{CLIP-A}, {CLIP-B}, or {CLIP-C}** to assign the highlighted clip to the corresponding softkey.

D. Press **[ESC]** to exit.

6. LIVE/ RECORDED SOURCE SELECTION (3R/1P MODE ONLY)

Select the desired live source to view in EE mode, or recorded video to view in PB mode as follows:

Press **{CAM-A}** to view the live source or recorded video from Mira channel A.

Press **{CAM-B}** to view the live source or recorded video from Mira channel B.

Press **{CAM-C}** to view the live source or recorded video from Mira channel C.

OR

Press **{CLIP}** to view the assigned pre-recorded clip.

View selected video on Mira channel D.

7. LIVE / RECORDED SOURCE SELECTION (SSM MODE ONLY)

Select the desired live source to view in EE mode, or recorded video to view in PB mode as follows:

Press **{CAM-A}** to view the live source or recorded video from Mira channel A.

OR

Press **{CLIP-A}** to view the assigned pre-recorded clip from Mira channel B.

Press **{CLIP-B}** to view the assigned pre-recorded clip from Mira channel C.

Press **{CLIP-C}** to view the assigned pre-recorded clip from Mira channel D.

8. SAVE CLIP

- A. Press **[IN]** to mark an IN point and overwrite an existing IN point using the current timecode. Or enter a timecode using the numeric keypad and press **[IN]**.
- B. Press **[OUT]** to mark an OUT point and overwrite an existing OUT point. Or enter a timecode using the numeric keypad and press **[OUT]**.
- C. Press **[SAVE CLIP]** to save the IN and OUT points in the next available clip number.

NOTE- If CAM-A, CAM-B, or CAM-C is currently selected, one clip for each CAM will be saved automatically. If CLIP is currently selected, only one clip for CLIP will be saved.

Clips created from CAM-A are numbered 1000 to 1399.

Clips created from CAM-B are numbered 2000 to 2399.

Clips created from CAM-C are numbered 3000 to 3399.

Clips created from CLIP are numbered 4000 to 4399.

(The 1st digit refers to the source from which the clip was created)

OR

Manually enter a clip number (3 digit number) using the numeric keypad, and then press **[SAVE CLIP]** to save the IN and OUT points into the entered clip number

The IN point HH:MM:SS is assigned as the default Clip Label.

- D. Press **[DEL] + [IN]** to clear the IN point.
- E. Press **[DEL] + [OUT]** to clear the OUT point.

9. RECALL CLIP

- A. Press **[NEXT]** to highlight the next clip in the clip list portion of the display.
- B. Press **[LAST]** to highlight the previous clip in the clip list portion of the display.
- C. Clips are automatically loaded as they are highlighted.

OR

Manually enter a clip number using the numeric keypad, and then press **[RECALL CLIP]** to recall the selected clip.

NOTE- If a 1, 2, or 3-digit number is entered, the clip number in the range corresponding to the playback channel's currently selected source (CAM-A, CAM-B, CAM-C, or CLIP) will be recalled.

10. TRIM EXISTING CLIP

Mark a new IN point, new OUT point, or new IN & OUT point.

- A. Recall an existing clip.
- B. Use transport keys to locate a new IN point.
- C. Press **[IN]** to mark the new IN point.
- D. Use transport keys to locate desired OUT point.
- E. Press **[OUT]** to mark the new OUT point.
- F. Press **[SAVE CLIP]** to replace the original clip with the trimmed clip.

OR

Manually enter clip number using the numeric keypad, and then press **[SAVE CLIP]** to save trimmed clip in the entered clip number.

OR

Or press **[SHIFT/ESC] + [SAVE CLIP]** to trim all camera angles saved to this clip.

11. LABEL OR RE-NAME AN EXISTING CLIP

Label the highlighted clip using a PC keyboard connected to the DMAT.

Manually enter an alpha-numeric label on the PC keyboard.

Press ENTER on the PC keyboard to save the label.

12. DELETE SAVED CLIP

- A. Highlight the desired clip in the DMAT-AB.
- B. Press [DEL] + [SAVE CLIP] to delete the clip. This will delete all 4 angles saved within that clip.

13. CREATE PLAYLIST

- A. To select Playlist, enter 2-digit number, from '00' to '19', on the numeric keypad, then press [LIST].
- B. Press [ADD/INS] to append the current clip to the end of the current Playlist.

OR

Press [ALT] + [ADD/INS] to insert the current clip above the highlight bar.

OR

Enter clip number using the numeric keypad, then press [ADD/INS] to append the entered clip number to the end of the current Playlist.

OR

Enter clip number using the numeric keypad, then press [ALT] + [ADD/INS] to insert the entered clip above the highlight bar.

OR

Press [DEL ELEM] to delete the currently highlighted element.

14. ASSIGN SPEED TO PLAYLIST ELEMENT

- A. Press [NEXT] or [LAST] to highlight the desired element in the current playlist.
- B. Press the {*SPEED*} softkey.
- C. Move the T-bar to set the desired speed.
- D. Press [ENTER], [NEXT], or [LAST] to assign the T-bar speed to the current element.

OR

Press [ESC] to exit without assigning speed to element.

15. GPI FUNCTIONS

GPI Inputs on the rear of the DMAT-AB may be used to execute Play, Stop, or Recue commands. The functionality depends upon the current mode of the unit. See specifications for GPI wiring diagram.

Current Mode	Function	Description
E-E / PB	PLAY	Begin playing the currently recording content
	STOP	Stop the current playback
	RECUE	Do Nothing
CP	PLAY	Begin playing the currently loaded pre-recorded clip
	STOP	Stop the current playback
	RECUE	Recue to the beginning of the clip
PL	PLAY	Begin playing the currently loaded playlist
	STOP	Stop playing the current playlist
	RECUE	Recue to the beginning of the playlist

DMAT-AB FUNCTIONALITY OVERVIEW

EE MODE:	Press {CAM-A} , {CAM-B} , and {CAM-C} to instantly switch between input sources on Mira channels A, B, and C.
	Press {CLIP} to instantly exit EE mode and load assigned, pre-recorded clip for playback. Clip will load and pause at first frame of video.
	Press [RECALL CLIP] to exit EE mode and load selected clip for playback.
	Press [LIST] to exit EE mode and load selected highlight list for playback.
	Move T-bar or press any transport key to exit EE mode and go to PB mode.
PB MODE:	Press {CAM-A} , {CAM-B} , and {CAM-C} to instantly switch between playback sources from Mira channels A, B, and C. (The current playback time does not change when switching between CAMs.)
	If {CLIP} was previously selected, CAM-A, CAM-B, or CAM-C will load and pause at first frame of video.
	Press {CLIP} to load the assigned, pre-recorded clip for playback. Clip will load and pause at first frame of video.
	Press [RECALL CLIP] to exit PB mode and load selected clip for playback.
	Press [REC] to exit PB mode and view live source of selected CAM
CP MODE:	Press {CAM-A} , {CAM-B} , and {CAM-C} to load the associated clip for the current clip number. The clip will load and pause at its IN point.
	Press {CLIP} to exit CP mode and load the assigned, pre-recorded clip for playback. Pre-recorded clip will load and pause at first frame of video.
	Press [RECALL CLIP] to load selected clip for playback.
	Press [LIST] to exit CP mode and load selected highlight list for playback.
	Press [REC] to exit CP mode and view live source of selected CAM
PL MODE:	Press {CLIP} to exit PL mode and load the assigned, pre-recorded clip for playback. Pre-recorded clip will load and pause at first frame of video.
	Press [RECALL CLIP] to exit PL mode and load selected clip for playback.
	Press [REC] to exit PL mode and view live source of selected CAM

16. DMAT-AB FUNCTION TABLE

Current Mode	Operation	Function	Next Mode	Description
EE	T-BAR	Slow Motion	PB	Slow Motion Playback.
	[SLOMO]	Slow Motion	PB	Slow Motion Playback.
	[SHIFT] + T-BAR	Set Slow Motion Speed	EE	Set Slow Motion speed without affecting current transport mode.
	[PLAY]	Play	PB	Playback from current time of day time.
	[JOG]	Jog	PB	Jog from current time of day time.
	[FFWD]	FFWD	PB	FFWD from current time of day time (press & hold key).
	[RWD]	RWD	PB	RWD from current time of day time (press & hold key).
	[SHUT]	SHUTTLE	PB	Shuttle from current position.
	[NEXT]	Highlight Next Clip	EE	Highlight Next Clip in CLIP LIST.
	[LAST]	Highlight Previous Clip	EE	Highlight Previous Clip in CLIP LIST.
	[GOTO] + Entered Timecode + [GOTO]	Goto TC	PB	Search to entered time code.
	[GOTO] + [IN]	Goto IN Point	PB	Search to IN Point
	[GOTO] + [OUT]	Goto OUT Point	PB	Search to OUT Point
	[IN]	Mark IN Point	EE	Mark IN POINT based upon RECORD time.
	[OUT]	Mark OUT Point	EE	Mark OUT POINT based upon RECORD time.
	[SAVE CLIP]	Save CLIP	EE	Save a CLIP with IN and OUT point at next available clip number.
	Enter Number + [SAVE CLIP]	Save CLIP	EE	Save a CLIP with IN and OUT point at entered clip number.
	[SHIFT/ESC] + [SAVE CLIP]	Save CLIP	EE	Save trimmed clip at current clip number and apply to all camera angles within that clip.
	[RECALL CLIP]	Recall CLIP	CP	Recall current clip number.
	Enter Number + [RECALL CLIP]	Recall CLIP	CP	Recall entered clip number.
	[SHIFT] + IN	Search to IN	PB	Search to the marked IN POINT.
	[SHIFT] + OUT	Search to OUT	PB	Search to the marked OUT POINT.
	[INS/ADD]	Add Element	EE	Add current CLIP to end of current Playlist.
	Enter Number + [INS/ADD]	Add Element	EE	Add entered CLIP number to end of current Playlist.
	[ALT] + [INS/ADD]	Insert Element	EE	Insert current CLIP into current Playlist above highlight bar.
	Enter Number + [ALT] + [INS/ADD]	Insert Element	EE	Insert selected CLIP into current Playlist above highlight bar.
	[DEL ELEM]	Delete Element	EE	Delete currently highlighted element in Playlist.
	[ALT] + [DEL ELEM]	Delete Playlist	EE	Delete current Playlist.
	[LIST]	Load Playlist	PL	Load current Playlist and cue first element.
	Enter Number + [LIST]	Load Playlist	PL	Load entered Playlist number and cue first element.
	[SHIFT] + [NEXT]	Display next clip page	EE	Display the next page of clips.
	[SHIFT] + [LAST]	Display previous clip page	EE	Display the previous page of clips.
	[ALT] + [NEXT]	Step to next element	EE	Step to next element in current Playlist. Do not cue.
[ALT] + [LAST]	Step to previous element	EE	Step to next element in current Playlist. Do not cue.	
[PREROLL]	Preroll to current time	PB	Searches to current time minus preroll value.	

Current Mode	Operation	Function	Next Mode	Description
PB	[REC]	E to E	EE	Go to EE mode.
	[PLAY]	Play	PB	Playout video from its current location.
	T-BAR or [SLOMO]	Slomo	PB	Slomo video from its current location.
	[SHIFT] + T-BAR	Set Slomo Speed	PB	Set slomo speed without affecting current transport mode.
	[REV]	Slomo Reverse	PB	Slomo video from its current location in Reverse direction.
	[JOG]	Jog	PB	Jog video from its current location
	[FFWD]	FFWD	PB	FFWD video from its current location (press and hold key).
	[RWD]	RWD	PB	RWD video from its current location (press and hold key).
	[SHUT]	Shuttle	PB	Shuttle from current position.
	[NEXT]	Highlight Next Clip	PB	Highlight Next Clip in CLIP LIST.
	[LAST]	Highlight Previous Clip	PB	Highlight Previous Clip in CLIP LIST.
	[GOTO] + Entered Timecode + [GOTO]	Goto TC	PB	Search to entered Time Code.
	[GOTO] + [IN]	Goto IN Point	PB	Search to IN Point
	[GOTO] + [OUT]	Goto OUT Point	PB	Search to OUT Point
	[IN]	Mark IN Point	PB	Mark IN point based upon playback Timecode.
	[OUT]	Mark OUT Point	PB	Mark OUT point based upon playback Timecode.
	[SAVE CLIP]	Save CLIP	PB	Save CLIP with IN and OUT point at next available clip number.
	Entered Number + [SAVE CLIP]	Save CLIP	PB	Save CLIP with IN and OUT point at entered clip number.
	[SHIFT/ESC] + [SAVE CLIP]	Save CLIP	PB	Save trimmed clip at current clip number and apply to all camera angles within that clip.
	[RECALL CLIP]	Recall CLIP	CP	Recall current clip number.
	Entered Number + [RECALL CLIP]	Recall CLIP	CP	Recall entered clip number.
	[SHIFT] + IN	Search to IN	PB	Search to the marked IN POINT.
	[SHIFT] + OUT	Search to OUT	PB	Search to the marked OUT POINT.
	[INS/ADD]	Add Element	PB	Add current CLIP to end of current Playlist.
	Enter Number + [INS/ADD]	Add Element	PB	Add entered CLIP number to end of current Playlist.
	[ALT] + [INS/ADD]	Insert Element	PB	Insert current CLIP into current Playlist above highlight bar.
	Enter Number + [ALT] + [INS/ADD]	Insert Element	PB	Insert selected CLIP into current Playlist above highlight bar.
	[DEL ELEM]	Delete Element	PB	Delete currently highlighted element in Playlist.
	[ALT] + [DEL ELEM]	Delete Playlist	PB	Delete current Playlist.
	[LIST]	Load Playlist	PL	Load current Playlist and cue first element.
	Enter Number + [LIST]	Load Playlist	PL	Load entered Playlist number and cue first element.
	[SHIFT] + [NEXT]	Display next clip page	PB	Display the next page of clips.
[SHIFT] + [LAST]	Display previous clip page	PB	Display the previous page of clips.	

	[ALT] + [NEXT]	Step to next element	PB	Step to next element in current Playlist. Do not cue.
	[ALT] + [LAST]	Step to previous element	PB	Step to next element in current Playlist. Do not cue.
	[PREROLL]	Preroll to current time	PB	Search to current time minus preroll value.

Current Mode	Operation	Function	Next Mode	Description
CP	[REC]	E to E	EE	Go to EE mode.
	[PLAY]	Play	CP	Playout clip from its current location.
	T-BAR or [SLOMO]	Slomo	CP	Slomo clip from its current location.
	[SHIFT] + T-BAR	Set Slomo Speed	CP	Set slomo speed without affecting current transport mode.
	[REV]	Slomo Reverse	CP	Slomo clip from its current location in Reverse direction.
	[JOG]	Jog	CP	Jog video from its current location.
	[FFWD]	FFWD	CP	FFWD clip from its current location (press and hold key).
	[RWD]	RWD	CP	RWD clip from its current location (press and hold key).
	[SHUT]	Shuttle	CP	Shuttle from current time.
	[NEXT]	Highlight Next Clip	CP	Highlight Next Clip in CLIP LIST.
	[LAST]	Highlight Previous Clip	CP	Highlight Previous Clip in CLIP LIST.
	[GOTO] + Entered Timecode + [GOTO]	Goto TC	PB	Search to entered Time Code.
	[GOTO] + [IN]	Goto IN Point	PB	Search to IN Point
	[GOTO] + [OUT]	Goto OUT Point	PB	Search to OUT Point
	[IN]	Mark IN Point	CP	Mark IN point based upon playback Timecode.
	[OUT]	Mark OUT Point	CP	Mark OUT point based upon playback Timecode.
	[SAVE CLIP]	Save CLIP	CP	Save trimmed clip at current clip number.
	Entered Number + [SAVE CLIP]	Save CLIP	CP	Save trimmed clip at entered clip number.
	[SHIFT/ESC] + [SAVE CLIP]	Save CLIP	CP	Save trimmed clip at current clip number and apply to all camera angles within that clip.
	[RECALL CLIP]	Recall CLIP	CP	Recall current clip number.
	Entered Number + [RECALL CLIP]	Recall CLIP	CP	Recall entered clip number.
	[SHIFT] + IN	Search to IN	CP	Search to the marked IN POINT.
	[SHIFT] + OUT	Search to OUT	CP	Search to the marked OUT POINT.
	[INS/ADD]	Add Element	CP	Add current CLIP to end of current Playlist.
	Enter Number + [INS/ADD]	Add Element	CP	Add entered CLIP number to end of current Playlist.
	[ALT] + [INS/ADD]	Insert Element	CP	Insert selected CLIP into current Playlist above highlight bar.
	Enter Number + [ALT] + [INS/ADD]	Insert Element	CP	Insert current CLIP into current Playlist above highlight bar.
	[DEL ELEM]	Delete Element	CP	Delete currently highlighted element in Playlist
	[ALT] + [DEL ELEM]	Delete Playlist	CP	Delete current Playlist.
	[LIST]	Load Playlist	PL	Load current Playlist and cue first element.

	Enter Number + [LIST]	Load Playlist	PL	Load entered Playlist number and cue first element
	[SHIFT] + [NEXT]	Display next clip page	CP	Display the next page of clips.
	[SHIFT] + [LAST]	Display previous clip page	CP	Display the previous page of clips.
	[ALT] + [NEXT]	Step to next element	CP	Step to next element in current Playlist. Do not cue.
	[ALT] + [LAST]	Step to previous element	CP	Step to next element in current Playlist. Do not cue.
	{CAM-A} , {CAM-B} , {CAM-C}	Change the current angle	CP	Change the currently selected camera angle in the clip being played back. Recues to IN point and begins playing.
	[PREROLL]	Preroll to IN point	CP	Search to IN point minus preroll value.

Current Mode	Operation	Function	Next Mode	Description
PL	[REC]	E to E	EE	Go to EE mode.
	[PLAY]	Play	PL	Play current Playlist from highlighted element.
	T-BAR	Slomo	PL	Slomo Playlist from its current location.
	[JOG]	Jog	PL	Jog playlist from its current location.
	[LAST] (Playlist not playing)	Cue to Previous Element	PL	Cue to previous element in Playlist.
	[NEXT] (Playlist not playing)	Cue to Next Element	PL	Cue to next element in Playlist.
	[NEXT] (Playlist playing)	Go to next element	PL	Immediately go to the next element in the Playlist during Playlist payout.
	{SKIP}	Skip next element	PL	Skip next element during Playlist payout.
	[IN]	Mark IN Point	PL	Modify IN point of current Playlist element.
	[OUT]	Mark OUT Point	PL	Modify OUT point of current Playlist element.
	[RECALL CLIP]	Recall CLIP	CP	Recall current clip number.
	Entered Number + [RECALL CLIP]	Recall CLIP	CP	Recall entered clip number.
	[SHIFT] + IN	Search to IN	PL	Search to current element IN POINT.
	[SHIFT] + OUT	Search to OUT	PL	Search to current element OUT POINT.
	[INS/ADD]	Add Element	PL	Add current CLIP to end of current Playlist.
	Enter Number + [INS/ADD]	Add Element	PL	Add entered CLIP number to end of current Playlist.
	[ALT] + [INS/ADD]	Insert Element	PL	Insert current CLIP into current Playlist at highlight bar.
	Enter Number + [ALT] + [INS/ADD]	Insert Element	PL	Insert current CLIP into current Playlist at highlight bar.
	[DEL ELEM]	Delete Element	PL	Delete currently highlighted element in Playlist.
	[ALT] + [DEL ELEM]	Delete Playlist	PL	Delete current Playlist.
	[LIST]	Load Playlist	PL	Load current Playlist and cue first element.
	Enter Number + [LIST]	Load Playlist	PL	Load entered Playlist number and cue first element.
	[SHIFT] + [NEXT]	Cue to next IN/OUT	PL	Cue to next IN POINT or OUT POINT in current Playlist.
[SHIFT] + [LAST]	Cue to previous IN/OUT	PL	Cue to last IN POINT or OUT POINT in current Playlist.	
{SPEED}	Assign speed to element	PL	Assign speed to highlighted Playlist element.	

Reference

17. SETUP MENU

Press **[MENU]**. The MENU indicator will turn on.

Turn wheel to select menu item.

Press the **{CHANGE}** softkey to open the choices for that item.

Press **{BACK}** softkey to save change and return to menu.

Press the **{EXIT}** softkey to exit the Setup Menu.

FUNCTION	DESCRIPTION
{CLEAR}	Select Item to Clear {CLR CLIPS} Delete all clips from 1000 to 1399, 2000 to 2399, 3000 to 3399, and 4000 to 4399. {CLR LISTS} Delete all Playlists, (00 19), {CLR MEMORY} Clear all non-volatile memory including clips and Playlists.
{DEFAULTS}	{SET DEFAULTS} Set Setup Menu parameters to factory programmed defaults.
DMAT MODEL	Select 3 Record / I Playback (3R/1P) or Super Slomo (SSM) mode to match the configuration of the Mira. See the Mira documentation for details on the modes of operation.
VIDEO STANDARD	Select {PAL} or {NTSC} .
PREROLL VALUE	Enter Preroll Value. Default – 5 seconds.
AUTO JOG	Select {ENABLE} to enable jog by turning wheel. Select {DISABLE} to disable function.
SHUTTLE SPEED MAXIMUM	{20x} Limit shuttle speed to 20x play speed. {49x} (Default) Limit shuttle speed to 49x play speed.
T-BAR MAXIMUM SPEED	Select 100%, 200% or 300% of play speed when T-bar is at highest vertical position.
JOG SPEED MAXIMUM	Select 100%, 200%, 300% or 400% of play speed when jog wheel is being moved at maximum rate. Only applies while in Jog mode.

FUNCTION	DESCRIPTION
SPEED	
CLIP AUTO SAVE	When enabled, In or Out points will automatically be set based on the pre-set clip duration for the corresponding cam. Default is Disabled. Only functions in PB and EE mode.
CAM-A AUTO DURATION	Enter pre-set clip duration for clips on CAM-A. Default is 5 seconds.
CAM-B AUTO DURATION	Enter pre-set clip duration for clips on CAM-B. Default is 5 seconds.
CAM-C AUTO DURATION	Enter pre-set clip duration for clips on CAM-C. Default is 5 seconds.

18. SPECIFICATIONS

Power:	90 VAC to 265 VAC adapter supplied with IEC connector APX Model #AP4108 +5v @ 4A, +12v @ 1.0A, -12V @ 0.6A	
Size:	[L" x W" x H"] 12 3/4" x 8" x 1 3/4" (front) 3 5/8" (rear) [8 5/8" high to top of display]	
Weight:	10 lbs.	
Rear Panel Connectors:		
VTR1, 2, 3, 4, 5, 6	(All DB9F)	VTR 1 and VTR 2 only function
GPI	(DB26HDF)	
Power	(DB9M)	
SHOTBOX	(DB9F)	Not functional
PBIO	(DB9F)	Not functional
Keyboard	(6-pin mini DIN)	For PS/2 style keyboard
Ref. Video In	(BNC)	
LTC Input	(BNC)	Not used
Ground	Threaded stud	
Display:	Easy to read, back-lit LCD display	
Jog/Shuttle Wheel:	With mechanical detents	
T-Bar:	With mechanical detent at x1 speed.	

RS422 SERIAL CONNECTOR

9-Pin D-Type, Female (DB9F)

Pin #	1	Frame Ground	6	Receive Common
	2	Receive A ←	7	Receive B ←
	3	Transmit B →	8	Transmit A →
	4	Transmit Common	9	Frame Ground
	5	Spare		

POWER CONNECTOR

9-Pin D-Type, Female (DB9M)

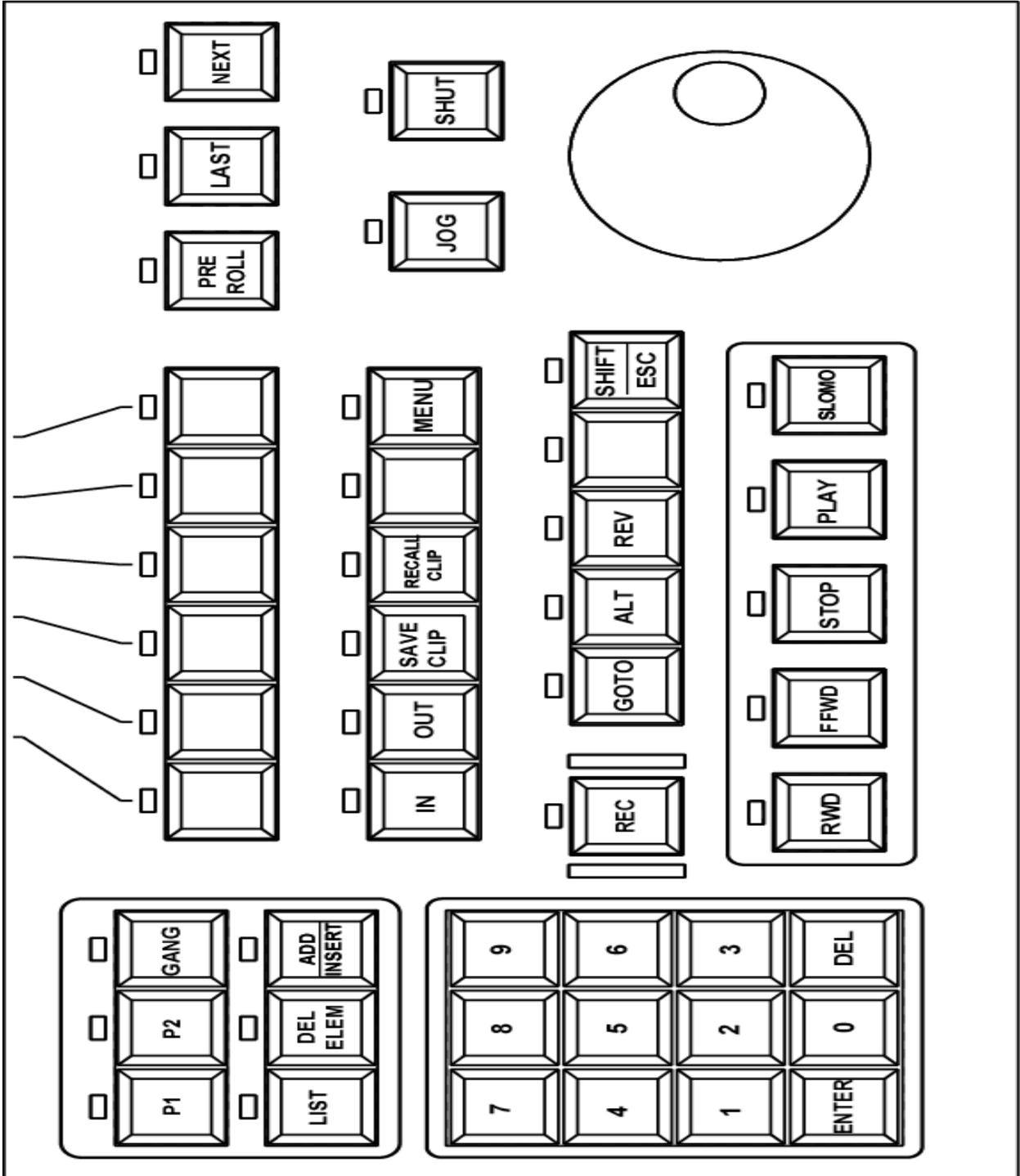
Pin #	1	+5v DC	6	+5 VDC
	2	+5v DC	7	Ground
	3	Ground	8	Ground
	4	+12 VDC	9	Ground
	5	-12 VDC		

GPI IN/OUT CONNECTOR

26-Pin D-Type, Female (DB26F)

Pin #	Function	Pin #	Function	Function
1	Not Used	14	GPI #5	No Function
2	Not Used	15	GPI #6	No Function
3	Not Used	16	GPI #7	No Function
4	Not Used	17	Not Used	
5	Not Used	18	Ground	
6	Not Used	19	+5V	
7	Not Used	20	+5V	
8	Not Used	21	Not Used	
9	Ground	22	Not Used	
10	GPI #1	23	Not Used	
11	GPI #2	24	Not Used	
12	GPI #3	25	Not Used	
13	GPI #4	26	Ground	

19. KEY LAYOUT



20. DNF CONTROLS LIMITED WARRANTY

DNF Controls warrants its product to be free from defects in material and workmanship for a period of one (1) year from the date of sale to the original purchaser from DNF Controls.

In order to enforce the rights under this warranty, the customer must first contact DNF's Customer Support Department to afford the opportunity of identifying and fixing the problem without sending the unit in for repair. If DNF's Customer Support Department cannot fix the problem, the customer will be issued a Returned Merchandise Authorization number (RMA). The customer will then ship the defective product prepaid to DNF Controls with the RMA number clearly indicated on the customer's shipping document. The merchandise is to be shipped to:

DNF Controls
12843 Foothill Blvd., Suite D
Sylmar, CA 91342
USA

Failure to obtain a proper RMA number prior to returning the product may result in the return not being accepted, or in a charge for the required repair.

DNF Controls, at its option, will repair or replace the defective unit. DNF Controls will return the unit prepaid to the customer. The method of shipment is at the discretion of DNF Controls, principally UPS Ground for shipments within the United States of America. Shipments to international customers will be sent via air. Should a customer require the product to be returned in a more expeditious manner, the return shipment will be billed to their freight account.

This warranty will be considered null and void if accident, misuse, abuse, improper line voltage, fire, water, lightning or other acts of God damaged the product. All repair parts are to be supplied by DNF Controls, either directly or through its authorized dealer network. Similarly, any repair work not performed by either DNF Controls or its authorized dealer may void the warranty.

After the warranty period has expired, DNF Controls offers repair services at prices listed in the DNF Controls Price List. DNF Controls reserves the right to refuse repair of any unit outside the warranty period that is deemed non-repairable.

DNF Controls shall not be liable for direct, indirect, incidental, consequential or other types of damage resulting from the use of the product.

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